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A NEW SPECIES OF *ERYTHRANTHE* (PHRYMACEAE) FROM CHINA

GUY L. NESOM
2925 Hartwood Drive
Fort Worth, Texas 76109

ABSTRACT

Erythranthe sinoalba Nesom, sp. nov., is described from Yunnan, China. It is an erect, rhizomatous perennial with large, white, red-dotted corollas, ovate, petiolate leaves, relatively long pedicels, and puberulent-glandular pedicels and petiole margins. Its closest relatives are hypothesized to be Asian species of *Erythranthe* sect. *Mimulasia*.

KEY WORDS: *Erythranthe sinoalba*, *Mimulus*, *Phrymaceae*, China

While studying Asian and Southern Hemisphere species of *Mimulus* sensu lato in preparation for recognition of generic segregates, a new and distinctive species has come to light. The collection was made on a botanical expedition to Gaoligongshan sponsored by the Kunming Institute of Botany and supported by the National Geographic Society (KUN-NGS). With parietal placentation, flowers on long pedicels, and suprabasal-acrodromous venation, it is placed in the genus *Erythranthe* (Barker et al. 2012).

Erythranthe sinoalba Nesom, sp. nov. Fig. 1. **TYPE: CHINA. Yunnan**. Gongshan. Cikai Zheng. E side of Gaoligong Shan, along the Danzhu He on the road from Nu Jiang at Danzhu to the Myanmar border, 27° 37' 49" N, 98° 37' 18" E, 2650 m altitude, mixed broad-leaved evergreen and coniferous forest with most of the conifers recently cut and removed; growing on wet rock faces above road, flowers white with reddish specks at base of throat, 1 Jul 2000, *Li Heng 11827* (MO). Eight duplicates were collected, as noted on the label.

Similar to *Erythranthe procera* (A.L. Grant) Nesom of southeast Asia in its tall, erect, single-stemmed habit but the leaves larger with more coarsely serrate margins, pedicels and nodal regions puberulent-glandular with gland-tipped hairs, longer pedicels, and corollas white with longer tubes.

Perennial herbs, rhizomatous. **Stems** erect to ascending-erect, 30–40 cm, simple with branches beginning to develop at flowering, glabrous. **Leaves** mostly cauline, largest distally, basal greatly reduced in size, petiolate, blades ovate to elliptic-ovate, venation suprabasal-acrodromous (pinnate) with 2-7 veins per side, margins coarsely serrate with 3–9 teeth per side, apex acute, base cuneate, petioles 3–10 mm long, margins of petiole bases sparsely glandular-puberulent. **Fruiting pedicels** ca. 25 mm long, straight, erect to erect-ascending, sparsely glandular-puberulent with gland-tipped multicellular hairs 0.1–0.6 mm long. **Calyces** green, tube 12 mm long, obtriangular, 5-angled but not distinctly ridged or winged, in fruit elongating to 12–14 mm and becoming broadly ellipsoid-inflated, lobes narrowly triangular with caudate-attenuate apices, 2 mm long. **Corollas** white, drying slightly yellowish, with reddish dots at base of throat, bilabiate, tube narrowly funnelform, 32–34 mm long, lobes orbicular-obovate with retuse apices, the limb expanded and ca. 20–25 mm wide. **Stamens** glabrous, included, shorter than the style. **Style** pubescent, included. **Fruit** broadly ellipsoid, 10 mm long.

MISSOURI
BOTANICAL GARDEN
HERBARIUM
Nº 5778804
FLORA OF CHINA
SCROPHULARIACEAE
Mimulus sp.
CHINA: Yunnan: Gongshan: Cikai Zheng:
E side of Gaoligong Shan, along the Danzhu He on the road from Nu Jiang at Danzhu to the Myanmar border
27°37'49"N, 98°37'18"E
2650 m altitude
Mixed broad-leaved evergreen and coniferous forest with most of the conifers recently cut and removed. Growing on wet rock faces above road.
Herb. Flowers white with reddish specks at base of throat.
Coll. Li Heng 11827
Date: 1 July 2000
KUN-NGS 2000 Gaoligongshan Expedition. Team: Li Heng (P.I., KUN), Dao Zhiling (KUN), Philip Thomas (E), Bruce Bartholomew (CAS), Peter Fritsch (CAS), Wang Zhonglan (KUN), Li Rong (KUN), Yi Tingshuang (KUN), Yin Liwei (XTBG).
No. of duplicates: 8
MISSOURI BOTANICAL GARDEN HERBARIUM (MO)
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Figure 1. *Erythranthe sinoalba* Nesom (holotype).

Erythranthe sinoalba is similar in its tall, erect, single-stemmed habit and pinnately veined (suprabasal-acrodromous) leaves to the species of *Erythranthe* sect. *Mimulasia*, which includes nine southeast Asian species (see Barker et al. 2012) as well as the Mexican-Central American *E. orizabae* (Nesom 2011b), and *E. dentata* (Nutt. ex Benth.) Nesom of the Pacific Northwest. It differs from all of these, however, in its larger and white corollas (the others have yellow corollas) and particularly in its pedicels and petiole margins distinctly puberulent with gland-tipped hairs (all of the other species of sect. *Mimulasia* are eglandular).

Molecular analyses indicate that *Erythranthe* sect. *Mimulosma*, which is primarily American and characterized by glandular vestiture, has a sister relationship to sect. *Mimulasia*. The glandularity of *E. sinoalba* is interpreted here as further evidence of the close relationship of sect. *Mimulasia* to sect. *Mimulosma*. The only other Asian species of sect. *Mimulosma* is the Russian *E. stolonifera* (Novopokr.) Nesom, which has prostrate-creeping stems similar to those of *E. moschata* (Douglas ex Lindl.) Nesom of the northern USA and Canada.

Other species of *Mimulus* sensu lato in southeastern Asia (e.g., Deyuan & Wen 2011; Ohwi 1984) are of different relationships and distinctly different from *Erythranthe* sects. *Mimulosma* and *Mimulasia* in various morphological aspects: *Mimulus bracteosus* (treated by Barker et al. 2012 as *Mimulus* sensu stricto); *Mimulus tibeticus* and *M. platyphyllus* (placed by Barker et al. 2012 in *Erythranthe* sect. *Sinopitheca*).

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